

In The Claims:

1. (Currently Amended) A filter module comprising a single lens, three optical fibers, an optical filter, and a mirror, wherein said three optical fibers are arranged on a single side of said lens, wherein the filter module is configured to receive a signal and to output a filtered portion of the signal and an unfiltered portion of the signal on the single side of said lens.

2. (Original) The filter module according to claim 1, wherein said lens is a refractive index distribution type rod lens having first and second end faces on opposite sides of the lens, wherein the first end face is coated with said optical filter, and wherein said three optical fibers are arranged on the second end face.

3. (Currently Amended) The filter module according to claim 1, further comprising a capillary for holding said three optical fibers, wherein the capillary is provided with a single through hole for holding the three optical fibers and wherein the capillary and the lens are cylindrical and the capillary has substantially the same diameter as that of the lens.

4. (Original) The filter module according to claim 3, wherein said through hole is formed by three inner walls, wherein said three optical fibers contact each other in said through hole, and each of said three inner walls contacts two optical fibers.

5. (Original) The filter module according to claim 1, wherein said mirror is a board having a wavelength independent total reflection mirror, and said mirror is arranged to face said optical filter.

6. (Original) The filter module according to claim 1, wherein said optical filter is a wavelength selective transmitting film, and wherein a set of fiber collimators is provided facing said wavelength selective transmitting film.

7. (Currently Amended) A demultiplexing/multiplexing unit, which is a multichannel demultiplexing/multiplexing unit formed by connecting in cascade a plurality of filter modules, wherein each of the filter modules comprises a single lens, three optical fibers, an optical filter, and a mirror; and said three optical fibers are arranged on a single side of said lens.
8. (Original) The demultiplexing/multiplexing unit according to claim 7, wherein said lens is a refractive index distribution type rod lens having first and second end faces on opposite sides of the lens, wherein the first end face is coated with said optical filter, and wherein said three optical fibers are arranged on the second end face.
9. (Currently Amended) The demultiplexing/multiplexing unit according to claim 7, wherein said filter module further comprises a capillary for holding said three optical fibers, and the capillary is provided with a single through hole for holding the three optical fibers and wherein the capillary and the lens are cylindrical and the capillary has substantially the same diameter as that of the lens.
10. (Original) The demultiplexing/multiplexing unit according to claim 9, wherein said through hole is formed by three inner walls, wherein said three optical fibers contact each other in said through hole, and each of said three inner walls contacts two optical fibers.
11. (Original) The demultiplexing/multiplexing unit according to claim 7, wherein said mirror is a board having a wavelength independent total reflection mirror, and said mirror is arranged to face said optical filter.

12. (Previously Presented) The filter module as recited in claim 1, wherein the three optical fibers includes a first fiber, a second fiber, and a third fiber, the first fiber configured to carry a first signal characterized by a first wavelength and a second signal characterized by a second wavelength different from the first wavelength, the second fiber configured to output one of the first and second signals from the filter module, and the third fiber configured to carry the other of the first and second signals from the filter module.

13. (Previously Presented) The filter module as recited in claim 1, wherein all of the optical fibers of the filter module are arranged on a single side of said lens.

14. (Currently Amended) A filter module, comprising:

a single lens having a first end and a second end opposite the first end;

at least three optical fibers are arranged at the first end of the lens;

an optical filter positioned at the second end of the lens; and

a mirror disposed at the second end of the lens with the optical filter therebetween, wherein all of the optical fibers of the filter module are arranged on a single side of said lens.

15. (Previously Presented) The filter module as recited in claim 14, wherein the at least three optical fibers includes a first fiber, a second fiber, and a third fiber, the first fiber configured to carry a first signal characterized by a first wavelength and a second signal characterized by a second wavelength different from the first wavelength, the second fiber configured to output one of the first and second signals from the filter module, and the third fiber configured to carry the other of the first and second signals from the filter module.

16. (Previously Presented) The filter module as recited in claim 14, the lens is a refractive index distribution type rod lens having first face at the first end and a second face at the second end, wherein the three optical fibers are arranged at the first face of the lens, and wherein the second face is coated with the optical filter.

17. (Previously Presented) The filter module according to claim 14, further comprising a capillary for holding the three optical fibers, wherein the capillary is provided with a through hole for holding the three optical fibers, wherein the through hole is formed by three inner walls, and wherein the three optical fibers contact each other in the through hole, and each of the three inner walls contacts two optical fibers.

18. (Previously Presented) The filter module according to claim 14, wherein the mirror is a wavelength independent total reflection mirror, and the mirror is arranged to face the optical filter.

19. (Previously Presented) The filter module according to claim 14, wherein the optical filter is a wavelength selective transmitting film, and wherein a set of fiber collimators is provided facing the wavelength selective transmitting film.

20. (Previously Presented) The filter module according to claim 14, wherein a plurality of the filter modules connect in a cascade to form a multiplexing/demultiplexing unit.